



2016 QUARTERLY ISSUE #2

First record of short-finned pilot whale in Massachusetts

Pugliares et al. confirmed through genetics and morphological analysis that a stranded whale north of 41°N latitude was a short-finned pilot whale. This stranding took place outside the known distribution of short-finned pilot whales and highlights the importance of developing methods to accurately monitor and distinguish between short- and long-finned pilot whales for effective species management.

Photo courtesy of Katie Pugliares



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Recent Publications

Behavior

Friedlaender et al. 2016.
Multiple-stage decisions in a marine central-place forager.
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Adams et al. 2016.
A century of Chinook salmon consumption by marine mammal predators in the Northeast Pacific Ocean.
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Pitman et al. 2016.
Humpback whales interfering when mammal-eating killer whales attack other species: mobbing behavior and interspecific altruism?
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Climate affects timing of sea turtle breeding

Sea turtles are vulnerable to the effects of climate change in both their terrestrial and oceanic habitats. Patel et al. confirmed that nesting phenology of loggerhead sea turtles in Greece is negatively impacted by increased temperatures during breeding season. The researchers then used downscaled models to project nesting dates by as much as 50 to 74 days earlier by the year 2100.

Photo courtesy of Vincent Saba



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Coded wire tags identify adult salmon without impacting growth



Hatchery fish can be valuable assets of recovery programs for endangered species. However, it is important to identify returning adults to assess the contribution of each stocked life stage to overall Atlantic salmon returns.

Goulette and Lipsky found that implanting coded wire tags left of dorsal or adipose fins yielded high recovery and identification rates without impeding fish growth rates. The researchers provide an alternative and effective method to mark endangered or threatened fish species.

Photo courtesy of Graham Goulette



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Environment, Climate & Ecosystem Effects

Caldarone, MacLean and Beckman. 2016.



Evaluation of nucleic acids and plasma IGF1 levels for estimating short-term responses of postsmolt Atlantic salmon (*Salmo salar*) to food availability.

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Komoroske et al. 2016.

Sublethal salinity stress contributes to habitat limitation in an endangered estuarine fish.

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Population Studies

Alexander et al. 2016.

What influences the worldwide genetic structure of sperm whales (*Physeter macrocephalus*)?

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Bradbury et al. 2016.

Genetic mixed stock analysis disentangles spatial and temporal variation in composition of the West Greenland Atlantic Salmon fishery.

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Morin et al. 2016.

Genetic structure of the beaked whale genus *Berardius* in the North Pacific, with genetic evidence for a new species.

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Greater confidence in technique to estimate age and growth rate in green sea turtles

Life-stage durations, age-to-maturity, and total lifespan are basic biological characteristics that are unknown for many wild sea turtle species. Knowing the growth rate can provide insight into these life history traits. Goshe et al. tested and validated the technique of skeletochronology to predict carapace length from humerus bone measurements for Hawaiian green sea turtles. The researchers found no difference between carapace length measures at the time of capture and those estimated through skeletochronology. This method can be used to rapidly obtain accurate age and growth data for green sea turtles.

Photo courtesy of Stacy Hargrove



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Technology

Durban et al. 2016.
Photogrammetry of blue whales with an unmanned hexacopter.

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Conservation

Donnelly et al. 2016.
Phaeohyphomycosis resulting in obstructive tracheitis in three green sea turtles *Chelonia mydas* stranded along the Florida coast.

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McNatt, Bottom and Hinton. 2016.
Residency and movement of juvenile Chinook salmon at multiple spatial scales in a tidal marsh of the Columbia River estuary.

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The **Protected Species Science Branch (PSSB)** within the NOAA Fisheries Office of Science and Technology supports and provides the science necessary to inform management decisions. We do this by coordinating closely with the six Fisheries Science Centers, the Office of Protected Resources, and other NOAA Headquarters Offices.

This newsletter is intended to summarize the latest research on protected species from scientific publications that include one or more NOAA Fisheries authors. It will be distributed quarterly with alternate issues highlighting research from the East and West Coasts centers and offices.

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